UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,109	03/06/2002	John M. Twomey	ITL.0714US (P14147)	7915

21906 7590 07/26/2007

TROP PRUNER & HU, PC
1616 S. VOSS ROAD, SUITE 750
HOUSTON, TX 77057-2631

EXAMINER	
PATEL, JAY P	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
07/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/092,109	TWOMEY ET AL.	
	Examiner	Art Unit	
	Jay P. Patel	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-16,18-25 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24,25 and 27-30* is/are allowed.

6)☒ Claim(s) *1-2, 5-16 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the response field 11/20//2006.

2. This office action is made non-final.

3. Claims 1-2, 5-16, 18-25 and 27-30 are pending.

4. Claims 1-2, 5-16 and 18-23 have been rejected.

5. Claims 24-25 and 27-30 are allowed.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-2 and 5-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. In regards to claim 1, the steps of the claims are not clearly related. For example, the claim is confusing as to whether the voice data from a TDM stream is equivalent to voice data formatted as asynchronous transfer mode adaptation layer packets mentioned in the second limitation or are the two respective voice data different. Furthermore, it is also unclear as to whether the TDM frame is related to the TDM stream or whether the TDM stream and the TDM frame are distinct from each other.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 15-16, 18-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantwell et al. (US Patent 6493346 B1) in view of Weinmann (US Patent 6940857 B2).

11. In regards to claim 15, Cantwell shows a cross-connect and a frame relay circuit in figure 1.

A TDM frame database, to store pre-formatted frames reads on the frame relay access devices 28. The frame relay access device 28 is interconnected to a local area network, or host link 32 and converts Internet protocol, and system network architecture data to and from frame relay data. The conversion is inclusive of adding data link connection identifiers address; frame check sequence and other frame overhead (see column 2, lines 53-58).

The TDM matrix 26 reads on the processor-accessing frame from said frame database to fill the frames with voice data. The TDM matrix 26 is connected to the frame relay access devices 28 and communicates with these devices over T1 or E1 links 30 (see column 2, lines 49-52).

Cantwell fails to teach a processor to keep a refresh count each time a call is made or disconnected. Weinmann teaches the above-mentioned limitation. In figure 1,

Weinmann illustrates a communication network inclusive of multiple switches. Figures 3A and 3B are databases in one such switch 122 and contain the active and inactive connections and keep track of the participants in the active calls, respectively (see column 4, lines 48-65). Furthermore, since the switch contains the databases, which are updated, the switch must include a processor.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to implement the databases as taught by Weinmann in to the frame relay access device 28 as taught by Cantwell. The motivation to implement the databases would be to allow a frame relay apparatus to keep track of the number of open and active connections.

In regards to claim 16, the TDM matrix 26 in figure 1 of Cantwell reads on the TDM processor. Furthermore, the FRAD 28 is connected to the host over link 32 and FRAD 28 converts data to frame relay data (see column 2, lines 52-55). The FRAD 28 is connected to TDM matrix 26 via link 30. Therefore, the processor accessing the frame form the pre-formatted frame database to fill the frames with voce data from time division multiplex channels reads on the FRAD 28 being connected to the TDM matrix 26.

In regards to claim 18, the frame relay engine 98 within the frame relay circuit 24 (see figure 4 in Cantwell) reads on the processor reading data from each active channel and writing data into frames. The frame relay engine 98 converts PDUs to frame relay packets (see column 4, lines 18-23).

In regards to claim 19, the frame relay engine 98 in Cantwell performs conversions and writes converted data via PCI bus 96 to SAR (necessary for ATM switch) block 92 (see column 4, lines 18-23). Therefore, the frame relay engine and the conversion to SAR block 92 anticipates data in frame being divided into units which correspond to asynchronous transfer mode packets.

In regards to claim 21 and 22, filling the frame with voice data from an asynchronous transfer mode adaptation layer packet, is anticipated by ATM relay switch 36 in figure 1 of Cantwell. The ATM relay switch also anticipates an ATM processor. The ATM relay switch 36 transmits ATM data over link 38 to a frame relay network such as a DS1 trunk (see column 2, lines 64-66).

In regards to claim 23, the frame relay circuit 24 in figure 1 of Cantwell and the TDM matrix 26 in figure 1 are coupled to the ATM switch 36 via link 34. Therefore the link 34 reads on the coupling of the TDM processor with the ATM processor.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cantwell et al. (US Patent 6493346 B1) and Weinmann (US Patent 6940857 B2) in view of Knappe (US Patent 6922396 B1).

In regards to claim 20, Cantwell in combination with Weinmann teaches all the limitations of parent claims 15, 18 and 19. Neither Cantwell nor Weinmann in particular teaches the processor sending the frame to a queue after it has been filled. Knappe teaches the above-mentioned limitation. In figure 3, Knappe discloses a routing device

80 inclusive of a processor, which, assists in sending a packet from a receiving port to a corresponding queue of the sending port (see column 10, lines 8-10).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the ATM to TDM conversion disclosed by Cantwell and the databases taught by Weinmann with the routing device disclosed by Knappe. The motivation to combine would to provide an easy transition of a frame from a receiving to a sending port.

Response to Arguments

13. Applicant's arguments with respect to claims 1 and 15 have been considered but are moot in view of the new ground(s) of rejection.

Reasons for Allowance

14. Claims 24-25 and 27-30 are allowed.

15. In regards to claim 24, the cited prior art fails to teach, determining whether a refresh value indicating the number of active and inactive connections in a frame matches the value indicated in a processor.

Conclusion

16. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jpp 7/23/07

Jay P. Patel
Assistant Examiner
Art Unit 2616

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600